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EASTBOURNE

AND

SUMMER RESIDENCE

AND

WINTER RESORT.

BY

GEORGE MORRELL, F.R.S.E.

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EASTBOURNE
AS A
RESIDENCE FOR INVALIDS
AND
WINTER RESORT.

BY
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INTRODUCTION.

THIS *brochure* is intended to supply a want to some degree felt by many intending visitors to Eastbourne, who have not the materials for forming a clear judgment as to the propriety or probable efficacy of a short visit or a lengthened residence. Its purpose is neither to aspire to the usefulness of a Guide-book, nor to supersede in any way reference to, and direction by, medical men. Unfortunately, the failure to attain and secure improved health by residence at a given seaside resort is, in numerous cases, traceable to the neglect of this skilled guidance. To check, then, the too prevalent idea that indiscriminate selection of any seaside place of residence is, under all conditions, necessarily and certainly to be counted upon as efficacious, is to lessen in no degree the solid ground of reasonable expectation, while avoiding the loss and disappointment of shattered, because ill-founded, hopes. The perusal of the following pages may prove serviceable and helpful in leading to a sound preliminary

decision whether Eastbourne and the patient are mutually adapted for each other. In this way, while the great majority may be cheered by favourable and well-grounded expectations and almost certainty of benefit to be confidently hoped for, the small proportion of mis-sent visitors and disappointed invalids may be reduced to a minimum.

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June, 1882.

CHAPTER I.

SITUATION AND SURROUNDINGS.

“EMPRESS of Watering Places” is surely a lofty title. It has been given to Eastbourne—and deservedly. The natural beauties of the locality ever remain ; but the artificial creations are also ever in progress, and this choice spot of the Sussex coast is even now only in the early stages of her celebrity.

Thirty years ago the flanks of the Downs and the broad plain between them and the sea, close under the shadow of Beachy Head, were dotted with cottages, which in three places were grouped into villages, and together contained some 3,500 inhabitants. Seaward of one of these villages (the real Eastbourne) has sprung up a new town of stately character, to which the name of the older hamlet has been attached, but which topographically is entitled to, and really possesses, the more accurately descriptive name of Southbourne. Here are a succession of fine terraces, good houses, abundant accommodation for visitors and residents, a southern aspect, and parades and promenades among the finest of their class in Europe.

These residential advantages are placed in a setting and background of rich and varied scenery, always

noble and refreshing—never trivial or wearisome. This peculiar beauty of situation is one of the great charms of Eastbourne, and yet constitutes only one of its numerous elements of attractiveness. In all directions there is ample exercising space ; on the one hand undulating ground even approaching to a hilly district ; on the other ample flats : and fringing and connecting the whole, terraces of matchless length and majesty. Another advantage of Eastbourne resides in its peculiarity of abundant and especially clear light—a health-giving element by no means to be overlooked by the searcher for health or pleasure. Further, its elevated background is just high enough for protection, and low enough to prevent the feeling or appearance of a surrounded space. All is freely open to the purest air known.

Within the past seven years the singular natural and acquired distinctions of this favoured spot have attracted population more or less fluctuating, but now counting more than 22,000 souls, without the slightest suspicion of over-crowding ; but, on the contrary, with a refreshing and assuring air of abundant space.

Resting on a substratum of sandstone, the upper soil is light, dry, and porous to a remarkable degree. At low water the shore is as pure and free from unpleasant appeals to the eye and sense of smell as at high water. There is absolutely no mud. The rise of the tide is about 24 feet, and at high water the sea almost laves the stems of shrubs which here flourish and display their beauty close to the water in an unusual fashion. This luxuriance of vegetation is exhibited in other forms—by magnificent trees, pre-

served and flourishing in the streets, and by a prodigality of flowers everywhere.

2 This favoured district has two distinctly marked varieties of climate—the one bracing and invigorating, the other mild and emulsive. The invalid requiring a genial temperature and complete protection, can by a judicious selection of residence, secure this end, to be exchanged for a more bracing locality as convalescence and advice may point. In the matter of softness of climate Eastbourne is almost unapproachable, certainly within the British Isles. Its nearest competitor, Bournemouth, which enjoys a reputation that in time must give way before the immense superiority of Eastbourne, is elevated in the average residential parts by some 100 feet above the sea. Here we are just sufficiently raised to prevent stagnation, yet so near the sea level as to reap the fullest benefit from the equalising influence of the adjacent pure waters.

The Parades form a unique characteristic of Eastbourne. They are in three tiers or elevations, all planted and laid out with consummate skill, and presenting at all times of the year, and in every atmospheric condition, a scene of beauty and seductive freshness unsurpassed. These promenades can at nearly all times be used, for the singular freedom of Eastbourne from pernicious winds, and its wonderful dryness shortly after rain, are advantages of the first order in physical conditions contributing to its eminence as a health resort. Even if the promenades should prove temporarily unsuitable for exercise, the more inland attractions of Devonshire Park, a noble enclosure of lovely character, comprising 12 acres, are within a few

minutes available. And when the sunshine adds its frequent glow to the perfect repose of atmospheric calm, the noble pier, 1,000 feet long, is an appendage simply of incalculable benefit, and well used by those whom it is designed to benefit.

Whence and how, it will be asked, are all these advantages derived? It is simply to be answered that this favoured spot has the good fate practically to belong only to two great landlords, the great bulk, in fact, being the property of the Duke of Devonshire. To the public spirit, private enterprise, and benevolent purposes of His Grace, presiding like good genii over the region, are the many and elevated attractions entirely due. Capital to the extent, it has been stated, of not less than £300,000, has been freely laid out, not lavishly or without principle, but judiciously, under scientific advice, liberally and with unity of purpose, for bringing together the best modern sanitary conditions to back up the remarkable natural advantages of the site. Excellent have been the social influences of this policy. The ratepayers help themselves, and their own contributions to the local attractions and advantages in the form of sea wall, pavements, roads, and public works of every description, present a model for imitation by every municipality in the kingdom. Assuredly this far-sighted public spirit will reap its due reward.

CHAPTER II.

METEOROLOGY, SOIL, AND CLIMATE.

CLIMATIC peculiarities in relation to the public health occupy a position of primary rank. From the days of Pythagoras to present times this subject has most deservedly presented a field of inquiry of intense interest. In modern science the following generalisations are axiomatic :—

- a.* A preternaturally dry air, with a high temperature, predisposes to the development of fevers and intestinal disorders.
- b.* A very moist atmosphere, accompanied by a low temperature, is apt to induce bronchial and rheumatic affections.
- c.* A very dry atmosphere when associated with a low temperature, has a tendency to incite inflammation of the respiratory organs.

But though deduced by long experience, and proved by accurate observation, these results are neither invariable nor infallible. Medical science has means of alleviating and guarding against many of the effects naturally flowing from change of climate.

Under climatic conditions are comprised the prevailing meteorological character of the district, such as the daily temperature and rainfall; the variations and ranges of mean temperatures; the force, direction, and duration of winds; the barometric pressure; the extent and proportion of direct sunlight; the degree of humidity; and the amount of ozone.

Among the principal causes which determine and fix the climate may be enumerated—

1. The aspect and slope, which, at Eastbourne, are south.
2. The prevailing winds, and the degree of protection afforded by neighbouring heights.
3. The degree of confinement of the air.
4. Elevation of the land.
5. Character of the soil.
6. Proximity to the sea.

That in each and all these points Eastbourne is exceptionally favoured is the object of this chapter to show. Sloping to the sunny south, with no disadvantages of exposure to cold winds, with a natural barrier against the deposit of excessive moisture, with nearly surrounding high land, and yet with the utmost freedom for air circulation—elevated only a few feet above the sea, and possessing a light and porous soil, it would appear that Nature had exhausted all her resources in providing here conditions of climate unrivalled in the same latitude.

As I write mainly for the guidance of invalids, it is imperative that the character of the summer and

winter ranges of mean temperature be prominently adverted to. So important is this, that the tables of the Registrar General proclaim, with mathematical precision, the results on the public health of any sudden or excessive variation. Thus, in summer, a rise of mean temperature above the average increases the number of cases of intestinal affections, and the mortality arising therefrom. In winter, on the other hand, during which season there is a predisposition to lung diseases, an abnormal fall of mean temperature increases the number and relative degree of mortality arising from such cases. The Registrar-General calculates that, in London alone, a decline of temperature from 45° to 27° causes the deaths of 400 persons from bronchitis. Can a stronger illustration be needed of the importance to persons of delicate health of equable climate?

At Eastbourne, the result of long-continued observations is the record of a mean winter temperature of $41\frac{1}{2}^{\circ}$.* The highest temperature in July is about 75° , with a mean for that month of 60° . The range of variation therefore, between the mean summer and winter temperature is thus considerably less than 20° —a fact eloquent beyond words as to the life-preserving and health-giving qualities of Eastbourne. As an illustration of extreme variation in other directions, it may be mentioned that in the State of Wisconsin the annual temperature varies between 120° in summer, and 40° below zero in winter, or a range of no less than 160° Fah. Such conditions of climate are trying to the last degree to the endurance of the human

* See Table II. p. 17.

frame, and speedily fatal to those wanting in strength of constitution.

Next in importance to the happy condition of equable temperature is the subject of the properties of sea air. A prevalent error is that all persons, in every condition, derive benefit by a residence at the seaside. Though, undoubtedly, the cheek of the pale invalid loses its pallor, the spirits of the hypochondriac revive, the tone of the valetudinarian is improved, and the circulation of the jaded man of business is quickened, and his spirits are frequently soothed by the respiration of sea air, yet in this, as in every other provision of Nature, there is no infallible or universal and invariable effect capable of unskilled application. Only under carefully-based advice should a residence in this or that place be determined on and persisted in. For some cases, an inland atmosphere, with extreme dryness, but with the most moderate discoverable range of temperature, is preferable. But in all cases where sea air is calculated to prove a lasting benefit, its effects are chiefly traceable to the abundance of pure oxygen there inspired, mainly preserved by the absence of contaminating vapours, carbonic acid gas, and other sources of impurity, only too frequently diffused through the atmosphere of manufacturing towns. The constant agitation arising from the never-ceasing motion of the air at the coast, the uniformity of temperature imparted by the proximity of the water, and the freshness infused by the action of the tides and waves, all tend to the inalienable health-restoring properties of sea air.

But the good effects of moderation and slight varia-

tions of temperature, and proximity to the sea, might be, and in some districts are, at certain seasons of the year, almost neutralised by occasional liability to sudden low temperatures and searching winds, and to excessive rainfall. From these, Eastbourne enjoys an almost unparalleled freedom. Sufficiently backed by high lands, to shield it from cold winds, without interfering with due circulation, and protected to the westward by Beachy Head and its Downs from the deposit of excessive moisture, it would be difficult to imagine a situation of greater advantage.

The humidity of the air on the coast is commonly supposed to be greater than that inland ; but this does not necessarily involve a damp climate. An atmosphere laden with moisture is particularly easy to breathe and soothing to the lungs, and with the advantages which we possess of a light and wonderfully absorbent soil and good drainage, there is no risk of the prevalence of excessive humidity.

The health-giving properties of ozone are now fully recognised, and it is sufficient here to say that well-charged with ozone as the atmosphere ordinarily is near the coast where not contaminated with an excessive population, insalubrious mud banks, and manufacturing premises, Eastbourne enjoys its full proportion of the presence of ozone diffused through its atmosphere, and that its presence is found well sustained throughout the various seasons of the year.

A subtle, but far from unimportant element for consideration in climatic observations is the electrical condition of a sea-side resort. Negative electricity is mainly present during a humid state of the atmosphere.

Its relaxing and depressing effects are felt, though their cause and source are frequently unsuspected, in damp coast situations, confined districts, and abnormally warm places. From these distressing effects the visitor to Eastbourne may safely count on being absolutely free. The freedom of Eastbourne from excessive heat, the beauty of its situation, and the favourable electrical condition of its atmosphere, never fail in all persons properly resident here to induce an elevation of spirits, which in itself is one of the best handmaids to the medical adviser's skill.

Eastbourne, in addition to its pre-eminent natural advantages, is fortunate in numbering among its residents highly cultivated scientific observers, whose disinterested labours carried on for many years have resulted in the accumulation of indisputable facts proving the almost unique advantages of Eastbourne in respect of climatic conditions. Among these observers a prominent rank of honour belongs to George F. Chambers, Esq., F.R.A.S., barrister-at-law, from whose recent lecture on the climate of Eastbourne for fifteen years the following extracts are taken. It would be impossible in the same space to present a better and more graphic and convincing summary of the advantages of this model resort.

The information given is taken almost entirely from the quarterly reports of the Registrar-General, and, therefore, possesses a quasi authoritative value.

The following tables exhibit, in the form of annual summaries, such items of meteorological information as more particularly concern the convenience, tastes, and comforts of the general public.

TABLE I.—MEAN ANNUAL TEMPERATURE.

	Eastbourne.	Hastings.	Brighton.	Ventnor.	Bournemouth.
1867	— 49·5	...	...	...	48·7
1868	— 52·5	...	...	...	51·6
1869	— 50·3	...	...	...	49·8
1870	— 49·3	...	...	...	48·4
1871	— 49·8	..	48·6	...	48·8
1872	— 52·0	...	50·6	...	50·4
1873	— 50·2	...	49·5	...	49·3
1874	— 52·5	...	48·0	...	49·7
1875	— 51·1	49·0	49·5	...	49·3
1876	— 52·3	49·5	47·9	51·8	50·2
1877	— 52·8	...	50·0	52·1	...
1878	— 50·3	...	49·7	51·0	49·6
1879	— 47·3	...	46·8	47·3	46·1
1880	— 50·9	...	49·6	50·0	49·2
1881	— 49·7	...	48·6	49·3	48·3
Annual Average }	50·7	49·2	49·1	50·2	49·2

TABLE II.—MEAN WINTER TEMPERATURE (Jan., Feb., Mar.)

	Eastbourne.	Hastings.	Brighton.	Ventnor.	Bournemouth.
1867	— 40·4	...	...	...	40·2
1868	— 42·4	...	...	...	42·6
1869	— 43·0	...	...	...	43·4
1870	— 39·1	...	...	...	38·9
1871	— 41·0	...	39·8	...	40·9
1872	— 45·0	...	43·6	...	44·3
1873	— 41·5	...	40·3	...	40·9
1874	— 43·6	...	38·3	...	43·0
1875	— 41·2	40·0	39·8	...	40·9
1876	— 40·4	39·6	39·6	42·0	40·9
1877	— 44·9	...	42·9	46·5	44·6
1878	— 42·3	...	41·1	44·0	42·6
1879	— 38·4	...	37·7	39·0	38·1
1880	— 40·5	...	40·2	42·0	40·4
1881	— 38·7	...	37·7	39·3	37·9
Annual Average }	41·5	39·8	40·1	42·1	41·3

TABLE III.—RANGE OF EXTREME TEMPERATURE (Jan., Feb., Mar.)

	Eastbourne.	Hastings.	Brighton.	Ventnor.	Bournemouth.
1867 —	48·1	...	...	...	47·0
1868 —	37·4	...	...	...	37·5
1869 —	29·5	...	...	...	25·5
1870 —	38·8	...	...	...	36·9
1871 —	41·8	...	20·2	...	47·0
1872 —	39·3	...	29·0	...	30·3
1873 —	37·4	...	34·8	...	32·1
1874 —	41·0	...	35·2	...	32·7
1875 —	35·7	31·2	32·4	...	28·1
1876 —	37·8	36·6	33·1	31·7	35·8
1877 —	31·9	...	30·0	33·5	33·7
1878 —	34·4	...	31·1	31·8	32·7
1879 —	36·0	...	34·8	35·4	40·7
1880 —	48·2	...	40·7	34·8	40·1
1881 —	49·4	...	45·6	45·6	47·7
Annual Average }	39·1	33·9	33·3	35·4	36·5

TABLE IV.—ANNUAL NUMBER OF RAINY DAYS.

	Eastbourne.	Hastings.	Brighton.	Ventnor.	Bournemouth.
1867 —	185	...	...	...	171
1868 —	158	...	...	...	164
1869 —	164	...	...	...	166
1870 —	132	...	...	...	124
1871 —	167	...	161	...	152
1872 —	215	...	214	...	215
1873 —	171	...	179	...	160
1874 —	148	...	159	...	156
1875 —	142	176	143	...	152
1876 —	170	196	160	163	162
1877 —	199	210	185	184	175
1878 —	192	204	164	176	155
1879 —	180	212	174	193	187
1880 —	140	174	145	156	167
1881 —	169	...	153	165	146
Annual Average }	168	195	167	173	163

TABLE V.—TOTAL ANNUAL RAINFALL (Inches.)

	Eastbourne.	Hastings.	Brighton.	Ventnor.	Bournemouth.
1867 —	29·6	...	...	...	29·0
1868 —	29·1	...	...	...	35·4
1869 —	27·5	...	...	...	28·4
1870 —	27·3	...	...	...	23·8
1871 —	26·4	...	24·5	...	29·6
1872 —	41·7	...	36·7	...	43·6
1873 —	29·7	...	25·4	...	28·8
1874 —	25·3	...	23·5	...	25·8
1875 —	32·8	30·2	28·0	...	32·9
1876 —	37·3	32·1	31·9	32·3	32·0
1877 —	37·9	39·1	34·9	35·9	34·8
1878 —	31·7	36·7	29·8	33·4	23·5
1879 —	33·2	32·4	31·0	34·4	29·9
1880 —	34·6	35·7	28·9	36·5	30·2
1881 —	30·8	...	29·2	31·0	27·2
Annual Average }	31·6 In.	34·3	29·4	33·9	30·3

The average number of rainy days throughout England is about 180 per annum. The especial dryness of Eastbourne is here clearly shown. In this table some room for variety of observation should be made, as the definition of what constitutes a rainy day is one of the loose joints in meteorological science.

Dealing, first of all, with the mean annual temperatures, the order of progression is—(Table I.)

	Mean Annual Temperature.			
Eastbourne	50·7 deg.
Ventnor	50·2 „
Hastings	49·2 „
Bournemouth	49·2 „
Brighton	49·1 „

These figures will probably surprise many people,

but I have a much greater surprise to announce, and one for which I was, I must confess, unprepared myself. As the strength of a chain is only the strength of its weakest link, so the suitability or otherwise of a place (in England) as a permanent residence all the year round is, in some measure, indicated by the temperature which is experienced there on an average of years in the winter. To obtain some information as to this, I constructed Table No. 2, air temperatures of the winter quarter, comprising January, February, and March. The results are, I think, extremely remarkable. Ventnor, with all its boasted mildness, is, as regards the mean temperature of its air, only better off than Eastbourne during January, February, and March by half a degree, whilst Eastbourne enjoys a higher winter temperature than either Bournemouth, Brighton, or Hastings. The actual sequence is—(Table II.)

				Mean Winter Temperature.
Ventnor	...	...	...	42.1 deg.
Eastbourne	...	...	...	41.5 „
Bournemouth „	...	...	...	41.3 „
Brighton	...	...	...	40.1 „
Hastings	...	...	...	39.8 „

The average range of extreme temperatures in the air during the winter quarter is as follows—(Table III.)

				Greatest Winter Range.
Brighton	...	...	...	33.3 deg.
Hastings	...	...	...	33.9 „
Ventnor	...	...	...	35.4 „
Bournemouth	...	...	...	36.5 „
Eastbourne	...	...	...	39.1 „

These figures are all very near, and, though East-

bourne has a somewhat more considerable winter range than its rivals, the absolute differences are not important in amount. Other points must, however, be borne in mind in reviewing this division of our subject. Falls of snow at Eastbourne are comparatively rare, and when snow does come it seldom remains long on the ground. Hence I have ventured to assert that "a fall which is heavy and abiding at Eastbourne is commonly concurrent with weather which is very severe at inland localities."

Taking in order the places with which I am dealing in this paper, the sequence is as follows as regards the number of rainy days in a year. (Table IV.)

				Rainy days per annum.
Bournemouth	...	...	...	163
Brighton	...	...	...	167
Eastbourne	...	...	...	168
Ventnor	...	...	...	173
Hastings	...	...	...	195

The total annual rainfall naturally follows nearly the same sequence :— (Table V.)

				Annual rainfall (inches).
Brighton	...	...	...	29·4
Bournemouth	...	...	...	30·3
Eastbourne	...	...	...	31·6
Ventnor	...	...	...	33·9
Hastings	...	...	...	34·3

In regard, however, to rainfall and pleasure traffic a very important question is, "What is the character of the subsoil of a place?" A heavy rainfall on a porous soil may be less of an inconvenience to foot-passengers and pleasure-seekers than a much smaller rainfall on a heavy clayey soil which the rain neither

soaks through nor readily evaporates from. Eastbourne is well able to stand this test. It is often a matter of surprise to strangers how quickly our streets dry up even after heavy rain lasting for hours. It need hardly be explained that the cause of this is to be found in the fact that nearly the whole parish of Eastbourne stands on a porous sub-soil—chalk in the higher and older parts of the town—sandstone, &c., in the central and more modern parts; leaving only the eastern and marshy out-lying portions non-porous, so to speak. Even as to these a great change for the better has taken place during the last fifty years; for the marshes in the direction of Willingdon and Westham are much less habitually water-logged than they once were. The influence of Beachy Head and the Downs in arresting the progress of clouds charged with rain coming up with S.W. winds is also an important point in the climate of Eastbourne as regards rain. Of course the absence of rain means, as a rule, a greater prevalence of sunshine, comparing localities where the rainfall is large with those where it is small.

Theoretical science should indicate that the position of Eastbourne is one pre-eminently calculated, under skilful advice, to restore the suffering and to fortify the strong; but all theory would be unreliable unless borne out by the inexorable logic of facts. Happily this is most fully and completely the case. The tables and deductions of the Registrar-General point absolutely to this conclusion,* and though the

* See Table VI., p. 32.

subject of relative mortality, and the extent of human skill, enterprise, and foresight expended to lighten it belong to the next chapter, yet it is proper to say here that the expectations naturally deducible from a singular concentration in one favoured spot of superior natural and meteorological advantages are fully borne out by the observed results on human health and the duration of human life.

CHAPTER III.

SANITARY CONDITION.

THE work of the sanitary philosopher is here more than half accomplished by Nature, owing to the topographical advantages of the site. Its salubrity was assured before mankind became attracted hither in numbers. It only required due foresight and skilful scientific contrivance to ensure a continuance of the same conditions. Here, almost beyond all other places, it may be fairly claimed that all good sanitary precautions are attended to with a degree of perfection rarely observed. The resources of modern sanitary science have been taxed to attain the best results, and to lay out the expanding town with full regard to any possible future requirements. Enterprise, capital, philanthropic zeal, and unity of design and purpose, have all been concentrated on this good work, with what noble results we shall presently record.

The downs and open spaces provide ample breathing space, and it is impossible to doubt the permanence, under all circumstances, of illimitable volumes of pure air. The most universally diffused of all created things, the most constantly employed,

and the most essential for subsistence, fresh pure air, stands at the threshold of sanitary matters, and its presence throughout the whole is needed; and the topstone were insecurely placed without it. The composition of this vital universal fluid is just as important to be known as that of water.

Air of the greatest purity exists in situations far removed from polluting influences, whether of animal respiration, putrid exhalations, or manufacturing products. Mountainous and moorland districts usually furnish these conditions, being for the most part uninhabited.

Pure air consists approximately of the following component parts:—

Oxygen	...	...	209·6 parts in 1,000
Nitrogen	...	...	790· " "
Carbonic acid	...	...	0·4 " "

Moisture varying with temperature.

Traces of peroxide of hydrogen, nitrous and nitric acids, organic matter, and ammonia frequently appear; but only when their presence becomes more pronounced do they constitute actually injurious components. Nature has provided abundant means for renewing the vital characteristics of air when rendered deleterious by the chemical changes resulting from combustion and respiration. The principal of these are ozone, peroxide of hydrogen, and nitrous acid—efficient, though subtle, aerial scavengers, to whose agency and diffusion countless multitudes of men and animals are indebted for ceaseless activity in atmospheric purification and renewal. Ozone, perhaps the

most powerful of these as a re-oxidising agent, is rarely absent near the sea ; and so antagonistic is it to organic miasmata, that where and when ozone is present, the absence of the baneful impure air may be inferred. Eastbourne is rich, and permanently rich, in the presence of ozone.

The respiration of vitiated air is a fertile source of Consumption, which may be transmitted from generation to generation ; and devitalised air, *i.e.*, air from which the essential oxygen has been partially extracted, is the cause of innumerable diseases in town populations, and of not a few among those who thoughtlessly confine themselves to close rooms. Vegetation has an enormous purifying power ; hence its absence in towns is a distinct permanent injury to the life-sustaining power of urban atmospheres. Of the more absolutely poisonous forms of vitiated atmosphere, that containing sewer gas sustains and conveys bacteria and other low forms of cell life. Such poisonous gases, even when diluted with considerable quantities of air, penetrate dwellings and thoroughfares ; and though they may be inappreciable to the senses, are not, therefore, the less baneful. Their unsuspected presence has full opportunity to generate disease, and whole streets containing many victims to enteric fever are the not uncommon result. From Eastbourne these and other foul sources of disease are entirely absent. It not unfrequently happens that the atmosphere is purer at a distance of 500 or 600 yards from the coast than on the actual shore. Such an inland distance here brings us on the flanks of the glorious Downs, which it is

impossible to tread without the happy accompaniment of renewed spirits and a delightful sense of free respiration.

In dealing with the sanitary arrangements needful for a large actual or expectant population, the essential evils to be considered and provided against are impure air, impure water, dampness of soil, and retention of fæcal matter therein. The advance of education in this country has not as yet compassed instruction on this important subject ; and State assistance, except in a very slight and often inefficient form, is far from being established. Hence it is only from philanthropic sources, mercantile adventure, or union for public protection, that the necessary heavy expenditure can be derived ; and in the two latter cases unity of design and action is not always readily to be secured. We have fallen under the happiest of all auspices, combining private philanthropy, guided and referred to commercial elements of success, and carried out with liberal hands, with scientific singleness of aim.

The second great element of public health has been provided in an abundant supply of pure water. When Eastbourne first began to attract attention, 40 years ago, as a place of singular natural hygienic advantages, the houses at the sea-side were ill-supplied with water, but as the population was exceedingly small, no great practical inconvenience arose. As residents increased and visitors multiplied, these sources of supply were no longer adequate for immediate use, without counting on provision for future extended requirements. In 1844 a small water company was formed among the residents, which set up waterworks on a very limited

scale. These soon proved insufficient ; and about 1859 the Duke of Devonshire bought up their rights and established water works on a more extensive scale, calculated for the requirements of the growing community for long years to come. There are three reservoirs, and the supply of water is abundant and pure. One of the reservoirs is situated 400 feet above the sea level, and will contain two millions of gallons. The supply has therefore the three great and important elements of volume, purity, and abundant fall and pressure.

It were useless to hope for a healthy population if the water supply were polluted. This pollution as prejudicial to health might arise from an excess of mineral substances, or from the infiltration of the products of decaying organic matter, whether vegetable or animal. A more potent and certain cause of disease could not be found, and unfortunately the water most tainted with corruption is frequently most sparkling to the eye. Hence, subtle chemical analysis alone can be depended upon to reveal the presence of the dreaded ingredients. Under this test few waters could compare in their results with the water of Eastbourne.

Against dampness of soil comparatively little was needed at Eastbourne beyond what nature had already provided. The light and porous soil is of the very choicest to meet the most exacting desires of the most rigid sanitarians. It is well known that the mortality from consumption is greatly diminished by residence on or removal to a dry subsoil ; and as about one-seventh of all the deaths in England arise from tubercular diseases, the importance of this cannot be overstated. Moreover,

rheumatism, heart diseases, catarrhal affections, and ague are common in damp situations, hence their comparative rarity in this community, and the advantage to those suffering from these disorders to be derived from a removal here. What little was required of man in preventing the pollution of the soil was done, and done well and scientifically, by the planning and execution of a grand system of drainage. The prompt removal of all fæcal matter is thereby also well provided for ; and the sewerage system at Eastbourne exhibits a class of work worthy of being regarded as a model of the kind. The several sewers have their outfall at Langney Point, a spot very happily chosen as avoiding all risk of the sewage being washed back at high water to the shore opposite the town. These works have cost more than £35,000.

The unity and entire excellence of all the sanitary works executed and in existence in this place is due in a very eminent degree to the beneficent reigning spirit before adverted to. Thus the family possessions of the Duke of Devonshire in the neighbourhood have been a source of blessing to the community, as leading to the provision by His Grace of such admirable contributions to the preservation of the naturally salubrious and pre-eminently excellent hygienic conditions of the locality.

In nothing is the existence of public ignorance and culpable negligence in any place more clearly revealed than in the proportion of deaths in that district from preventible diseases. From these diseases as many as 120,000 lives are unnecessarily sacrificed in England and Wales every year ; but the proportion will certainly

diminish as attention to sanitary science extends, as the duty of putting it in force is recognised, and as its sound principles are acted upon. It is consolatory to know and record that Eastbourne has not lying at its door the public reproach of destroying life by preventible diseases.

A common fallacy is the almost universal impression on the minds of the otherwise well-informed that the revealed presence of disease demands forthwith sudden and violent methods of expulsion. Such a notion entirely overlooks the fact that revealed disease is too often only the indication of Nature that her laws have been too long evaded, and their practice neglected by the human being prostrated ; the disease is oftentimes but the natural culmination of baneful hygienic conditions ; and full restoration can only be safely and permanently secured by a restitution of those rights of sanitation and purity of surroundings, the continued absence of which Nature will not brook, submission to which she is ever willing to embrace and bless.

It is now necessary to explain the meaning of the term "death-rate," that term being constantly and very properly applied as an index of great moment in the determination of the sanitary advantages or defects of any place. It simply indicates the number of deaths in the course of each year out of every 1,000 persons resident. This number on an average throughout England and Wales is about 22 per 1,000, but is much higher in towns, ranging as high as 30 per 1,000, with an average throughout the country for town populations of 24·5 per 1,000. The average for rural popula-

tions is 19·6 per 1,000. It may be here stated that ordinarily a death-rate exceeding 17 per 1,000 indicates a corresponding waste of human life from preventible causes, while any average falling below this rate is indicative of superlative characteristics of salubrity in any district so favoured. These explanations will materially assist in grasping the full glorious purport of the following observations falling from the same authority already quoted (Mr. Chambers), showing the wonderful purity and life-extending and preserving powers of this locality. In all the cases here cited it will be borne in mind that the deaths recorded include not only those occurring among the resident healthy population, but also those of invalid visitors, who may perhaps have deferred too long their removal here, but every death among whom increases the average death-rate. Mr. Chambers says :—

“For several years back the Registrar-General has given once a year in the middle of the summer an elaborate statistical table of the death-rate of a large number of districts which include the principal English watering places. From these tables I have picked out some particulars which relate to Eastbourne and to the principal south-eastern watering-places which may be said more especially to compete with Eastbourne—namely, Margate, Ramsgate, Dover, Folkestone, Tunbridge Wells, Hastings, Brighton, Worthing, Littlehampton, and Bognor.

“The results yield the following annual averages for the quarter ending June 30 of every year from 1871 to 1881 :—

TABLE VI.—SUMMER DEATH-RATE OF ENGLISH SOUTH-EASTERN WATERING PLACES FOR 1881, AND COMPARISON WITH AVERAGE OF 11 YEARS.

			11 years, 1871-81.		1881
			All Causes.	Zymotic only.	only.
Littlehampton	...	...	13·4	1·0	15·6
Eastbourne	...	...	15·6	1·4	13·8
Worthing...	...	...	15·7	0·9	19·1
Tunbridge Wells	...	...	15·7	1·7	14·2
Ramsgate	...	...	16·1	1·4	16·9
Margate	...	...	16·8	1·2	17·8
Bognor	...	...	17·0	3·1	12·5
Folkestone	...	...	17·0	1·2	13·2
Dover	...	...	17·0	2·3	13·6
Brighton	...	...	18·1	1·6	16·6
Hastings	...	...	19·0	1·5	15·9

"It is proper to state that the averages for Littlehampton and Bognor are derived from returns extending over nine years.

"The low place in the list occupied by Brighton and Hastings will at once attract notice.

"Taking only the year 1881 (census year) some changes of sequence will be observed in the table; Bognor, Folkestone, and Dover all precede Eastbourne, though by a mere fraction; but Hastings and Brighton are both rather low down, and Hastings lowest of all.

"For some reason, which is not stated, and which I cannot divine, Bournemouth does not appear in any of the tables. Moreover, for a reason which I will give, it is probable that the figures for Eastbourne are too high. A death-rate depends, of course, on the arithmetical proportion of deaths to population. The

Registrar-General can only know a population in those years in which a census gives it to him. Now the census is taken every 10 years ; for the intervening nine years, therefore, he has to estimate the populations. Until the census of 1881 came out the Registrar-General could not possibly have known that Eastbourne was going to show a decennial increase between 1871 and 1881 of 100 per cent. None of the other towns here cited increased nearly as fast. It follows, therefore, that for the years immediately preceding 1881 the Registrar-General estimated the population of Eastbourne too low, and accordingly arrived at a death-rate too high. It is, therefore, probable, that the death-rate of 17·3 per 1,000 in 1879, and 14·9 in 1880 were severally incorrect and too high, and that the 1881 rate of 13·8 alone was accurate, so far as very recent years are concerned. Taking these facts into consideration, it is probable that the real annual death-rate of Eastbourne, for the 10 years ending 1881, was not 15·6, as the table shows, but no more than, perhaps, 13 or 14 per 1,000 at the outside. I have deemed it desirable to explain this matter somewhat fully, in order to prevent an erroneous interpretation being put upon the published figures. Of course, the point in question affects all the towns cited, and beyond doubt the 1881 figures deserve special reliance in respect of that year for all of them."

That such excellent effects on human life should be produced by residence at Eastbourne need occasion less surprise than admiration. It would be a subject for reproach if it were otherwise ; for, as the foregoing chapters have already shown, we possess slight daily

and annual ranges of temperature, freedom from extreme dryness and excessive humidity, a southern aspect, a protected and sheltered situation, combined with the utmost freedom of circulation, with the artificially added advantages of abundant water, perfect drainage, a pure shore, well-built houses, and an unrivalled marine promenade.

CHAPTER IV.

ATTRACTIONS AS A SUMMER RESIDENCE.

THE charms which have evoked the name of "Empress of Watering Places" as applied to Eastbourne are, as might be supposed, those which appeal most readily to the eye, even of the superficial observer. They are also, of course, more exuberantly displayed during the summer months, when Nature in this spot seems to revel in the display of all that is lovely, attractive, and spirit-refreshing. The present chapter, therefore, will make very slight demands on the attention, as the almost unquestioned supremacy of Eastbourne in its attractions for summer residence is too marked and well-known to demand more than a brief notice.

The preceding chapters have dwelt partially on the scientific aspects of this superiority ; and on questions of salubrity, picturesque setting, and appropriateness of locality, little further need here be said. Unquestionably to none is the importance of cheerful surroundings so important as to an invalid. Here they are displayed with unstinted bounty. And, as if man would emulate the rich profusion of Nature, an

elegant town has been planted on this fair soil. Of the purely artificial local creations none has better claims to special notice than Devonshire Park, which preserves for ever in the midst of the community a fine area of 12 acres laid out with admirable taste and skill, and maintained in perfect order, as a public pleasure and recreation ground. The remarkable abundance of good houses is due to early foresight on the part of the local authorities in laying down and compelling adherence to sound principles, both of construction and accommodation. The best natural advantages, and the most perfectly intended sanitary conditions might be rendered valueless for health restoration if the habitations were ill-constructed, the walls damp, and the drainage and ventilation left, as in too many places of public resort, to individual caprice, or possible culpable negligence. The same enlightened regulations which have given to Eastbourne such excellence in private residences have operated in furnishing it with fine hotels, combining with first-class accommodation the same homely and minute attention to construction and health-preserving minutiae which characterise the private dwellings. In spiritual matters, too, the various religious bodies have provided abundant and costly edifices, well suited by capacity to accommodate worshippers, and by dignity to elevate their devotion.

The early summer in Eastbourne is especially beautiful. The expanding foliage after the winter bareness is everywhere refreshing ; but here the greenness seems more verdant, the tints more pure, the rapidity of the change more remarkable, and the resulting scenes more refreshing than elsewhere. It is

only to the initiated few that the special charms of genial watering-places in the months of May and June are fully known, and by such, in annually increasing numbers, the locality is visited. The remarkably prolific character of Eastbourne for flowers has already been mentioned; and the powerful influence of all these things on the recovery of health almost amounts to a truism. An impression extensively prevails that if the winter of any place be favourable and mild, the summer will be relaxing. In some cases this may be so, but Eastbourne is not one of them. The extremely moderate range of mean temperature between winter and summer has been already dwelt on in the second chapter,* and need not be repeated here. We enjoy a climate which, for pulmonary diseases especially, offers the best chances for recovery of the invalid, and the fortification of the health of the weary.

The happy effects of direct sunlight which we enjoy to a striking degree, are not always fully and duly weighed. Direct sunlight in abundance is of itself useful to health in a marked degree. It favours nutrition; it favours nervous functions; it sustains, chemically or physically, the healthy state of the blood; and it constitutes no small or insignificant element in sustaining the spirits of those who are deprived for a time of a full measure of health, and who are naturally inclined, in consequence, to despondency. What is summer in a secluded place without the free play of sunlight? How cheerful is even its dullest day when at every moment the influence of this

* See page 13.

blessed medium is ready to be exerted. To children and elderly persons especially, is this benefit of abundant direct sunlight strikingly advantageous.

Of provision for public amusement, instruction, and recreation, a high place must be given of right to the noble Marine Parade, which, through a length of some three miles along the shore in tier above tier, and terrace surmounting terrace, offers the noblest and most tempting inducements to outdoor exercise. A new Public Hall has within the past few years been erected, and is in itself an adjunct of no slight value as an element in the recreative resources of Eastbourne. Here frequent concerts by the first *artistes* take place, and the natural qualities and physical conditions of the summer season are supplemented and aided by the purely internal resources of refined entertainments and elevating musical performances. Orchestral concerts and *al fresco* entertainments are also frequent during the summer months. Of the minor and less permanent attractions of Eastbourne may be mentioned the lawn tennis tournaments which are periodically held, and which attract here during their continuance, and for some time before and after, an influx of persons of superior station, thus reinforcing society in an agreeable manner, without the drawbacks inseparable from an ordinary crowd, such as some classes of races would inevitably bring. Of the negative advantages of Eastbourne in summer must be mentioned its distance from the great centres of population, which, while offering no obstacle to the real searcher for health, is just sufficiently beyond the ordinary bounds

of cheap trips to spare us the annoyance of sudden influx for the day of large numbers of undesirable persons. From these periodical visitations we are, so far, singularly free. The total absence from the town and neighbourhood of every kind of manufacture offers the best guarantee for the efficient and permanent avoidance of those deleterious influences which tend in many places to detract from the purity of the atmosphere.

Lastly, it is in the summer season that the perfect efficacy of the sanitary arrangements already described is likely to be most severely tested. It is consolatory to know that the test is readily and completely borne ; and if perfect drainage, an absorbent and ever dry soil, a unique position, luxuriant flowers and foliage, a pure and untainted beach, a readily accessible open country, mental food for the botanist, geologist, athlete, painter, and antiquary, in walks and drives of endless variety and interest, constitute sufficient attractions for a summer residence, then are we rich indeed.

CHAPTER V.

VALUE AS A WINTER RESORT.

OF several marine resorts it can be truly said that they are equally well adapted for summer and for winter residence ; but of none is this more emphatically the characteristic than of Eastbourne. Some favourite and traditionally fashionable places of temporary sojourn in the search for pleasure or health are only tolerable in summer—others are chiefly desirable in winter ; but from their great range of temperature ill-adapted for summer life. Having in the last chapter set forth the bases on which Eastbourne rests its claims, so freely and generally conceded, to be a summer residence well adapted for the seeker after recreation, or the invalid in quest of improved health, I propose now to adduce some of the grounds on which the reputation and efficiency of Eastbourne as a favourite and valued winter resort chiefly depend.

The South of Europe provides several Continental resorts, which, in ordinary seasons, are reckoned as the most perfect of genial climes, and which are, consequently, the regular destination of many travellers to whom robust health has been denied, but to whom riches—miserable substitute!—have been given. For such highly-favoured health resorts no possible exact

counterpart could be found in these more northern latitudes ; but as the few only can repair thither, it is consolatory to know that to a very great degree, and to a far more complete extent than might theoretically be supposed, we have an excellent substitute here.

Eastbourne is favoured in possessing two climates, neither of them extreme, but one more bracing, and the other remarkable for its mildness. By a judicious selection of locality, on which the local medical men are the best guides, the invalid whose case demands the most favourable and genial atmosphere may be located in a spot well calculated to induce improved conditions of health, and, as convalescence advances, may adopt the more open situation with the certainty of feeling well-regulated, bracing effects, which the greater strength can now bear, and which the onward march towards recovery demands.

To the invalid reduced in strength and low in spirits, a difference of one degree in the mean winter temperature in the locality selected for residence is of very great importance, not merely from its effects on the bodily and mental condition, but mainly from the adjuncts of situation and surroundings, which are, at the root of, and which cause, that difference. In a previous chapter* I have shown, from unquestionable authority, that we are favoured with a normal mean winter temperature of singular mildness, combined with unrivalled uniformity and moderation in the range of difference between the summer and winter temperatures. These atmospheric conditions are not only beneficial to the worn and weary, but point to

* See page 13.

the advantageous character of situation and surroundings under which we at Eastbourne live, and which are fully explained in the first chapter.

This equable and mild temperature is further enriched and its value enhanced by the additional blessing of moderation in rain-fall, and by the numerous natural and artificial sanitary advantages which Eastbourne possesses.

The importance of this mild temperature and limited range is especially great to all who suffer from pulmonary and tubercular diseases—bronchitis, emphysema, catarrhal affections, winter cough, scrofula, &c. To those suffering from any of these a very slight sudden fall of temperature in winter involves in all cases much discomfort, in some increased pain, and, in a few, even death.

It is undeniable that by the selection of a suitable winter residence, with a climate thus mild and even, under careful medical advice, many chest affections may be cured, and their course suspended or arrested, unless, unfortunately, the case has been permitted to attain too advanced a development, before the aid of proper climate has been sought; and even then such a properly-selected and duly-supervised residence is found in most cases to afford substantial and sweet relief.

Modern science has demonstrated that tuberculous diseases, and also certain affections popularly called scrofulous, such as diseased joints and glands, are the victims of a microphyte which is capable of ready transmission in impure atmospheres, and which will infect with general tuberculosis. It is not too

much to say that thousands of human lives are now annually sacrificed to the diseases produced by bacilli of the nature just mentioned, and that the results of recent investigations may lead at no distant period, by the aid of such a climate and such excessive purity of atmosphere as we enjoy, to the complete protection of the human frame from the ravages and transmission of those formidable enemies to human life. To the same cause has been attributed with much reason the origin of eruptive fevers; and their expulsion must be directed by attention to the same fundamental principles.

When it is considered that one-seventh of all the deaths of the human race within the range of scientific and statistical observation, are due to tubercular diseases, which also prove fatal to one-third of all who die in active middle age, the vast importance of attention to the means of alleviating and eventually of subduing such frightful scourges of human life cannot be over-rated. In too many instances the insidious disease is allowed to make too advanced a degree of progress to be arrested by any human aid. In such cases medical skill can only be exerted in relief of the sufferer; but the true principle under proper advice in all cases where the presence of tubercular or allied classes of disease is suspected or pronounced is to seek the aid of climate without delay.

The last report issued by the Registrar-General shows that in the year 1879, out of 271,496 deaths of males in England and Wales, 37,005 or 13·6 per cent. of the whole were from tuber-

cular diseases. Of 254,759 deaths of females in the same year, 33,390 or 13·1 per cent. were due to the same class of diseases. Thus, in one year alone, a total of 70,395 deaths out of 526,255, or an average for the whole country, male and female of 13·3 per cent., or 1 in 7 arose from the class of diseases commonly described as tubercular, that is scrofula, adenitis, white swelling, lumbar abscess, tabes mesenterica, tubercular peritonitis, phthisis, (consumption), hydrocephalus (water in the head), &c.

In this terrible revelation the chief place of mortal distinction is held by phthisis. Of the total deaths in England from tubercular diseases in 1879 (70,395 in number), 49,213—*i.e.*, 25,051 of males and 24,162 of females, were from phthisis. It is instructive to observe the ages at which these deaths from phthisis chiefly occurred. They are shown in the following table :—

TABLE VII.
AGES AND PERCENTAGES OF DEATHS OF MALES AND
FEMALES IN ENGLAND AND WALES FROM PHTHISIS
IN 1879.

AGES.	Under 5.	5—	10—	15—	20—	25—	35—	45—	55—	65—	75 and upwards.
Males ..	1,209	574	650	1,903	2,939	5,995	5,218	3,650	2,170	664	89
Females ..	1,164	611	1,137	2,759	3,383	6,216	4,640	2,511	1,237	431	73
Total ..	2,373	1,185	1,787	4,662	6,312	12,211	9,858	6,161	3,407	1,095	162
Percentage of the whole deaths of the year from all causes.	·45	·22	·34	·88	1·2	2·32	1·87	1·17	·63	·2	·03

It thus appears that the dreaded consumption is chiefly fatal at the ages between 20 and 50.

That so awful a visitation should have occupied the best attention of the medical profession need not be asserted. That its ravages have, to some extent, been diminished by timely skill and remedial measures, especially by a properly selected residence in the earliest stages of the disease, is undeniable. That its just treatment, and the means of fully combatting it, are known, it were indeed rash as yet to assert.

Two theories of the nature of consumption—each based on profound research and wide observation—are in existence, and each has its devoted followers. The one theory repudiates, and the other fully adheres to, the tubercular origin of chronic pulmonary phthisis. The first treats it as a form of chronic pneumonia ; the second as an exudation of the blood previously impoverished. That the disease has shown itself susceptible of successful treatment in arrest and cure, has been abundantly proved. Since 1852, when Dr. Quain published his striking and unimpeachable cases of alleviation, suspension, and cure under sthenic treatment, down to the present time, medical science has a long series of triumphs over the dreaded enemy to record, which, though important as individual cases, are not as yet sufficiently numerous to have made an appreciable diminution in the aggregate deaths from this cause. The most modern methods of microscopic research have, however, of recent years placed in the hands of the faculty increased powers for coping with the dreaded giant, especially when their skill is permitted to be brought to bear in the very earliest

stage. A disease which claims for itself one in eleven of all the deaths in England and Wales in a given period, lays upon every member of the community, and not alone, or even specially, on the medical profession, a load of duty and responsibility that by every means the fatal tribute shall be diminished, and thereby the sum of human life and of human happiness increased. In this consideration a front place must of necessity be assigned to judicious change of climate in the early development of consumptive symptoms ; and among British climates I am free to assert that none is for the purpose superior to that of Eastbourne ; and very few, notwithstanding traditional but ill-based views and unscientific grounds, are even comparable with it. Defective nutrition, arising from exhausted vitality, being at the root of the mischief, the climatic question admits of little controversy. A cool, dry, sunny, and moderately stimulating climate is the one best adapted for restoring vitality and warmth. A warm moist climate, and an exceptionally cold one, are equally, though for opposite reasons, worse than useless. It has been proved by long and well-balanced experiment, in the cases both of the military service and of civilian life, that a temperature ranging between 45° Fah. and 65° is the most conducive to the duration of human life.

Of the value of the climate of Eastbourne for convalescence after the lowering of the bodily faculties from disease or illness of almost every description, I have already spoken. It is unnecessary to dwell upon it for a moment longer. While presenting so much that is positively of benefit to the invalid and the

convalescent, it is important to mention the absence from us of that great drawback to marine residence—sea fogs. From these and their distressing influences we are almost entirely exempt. The slight degree of humidity, and absolute freedom from excess thereof, are probably, in a great degree, accounted for by the remarkable rarity of sea-fog ; and the abnormally low death-rate of Eastbourne may be fairly ascribed in no mean degree to their absence.

Passing from the stricken invalid to the same individual rising in spirits as bodily health is restored, it may be incidentally repeated that Eastbourne, more than almost every other place, supplies the very important element of cheerful natural surroundings, with every appliance and advantage for completing the cures which its mild and equable climate is so well calculated to begin.

CHAPTER VI.

COMMON ERRORS OF INVALIDS.

To define the exact boundary between the healthy and the invalid state were no easy matter ; but the first common error of invalids is to date the commencement of illness from the period at which its appearance is first observed ; forgetting that the pain, or the prostration, or the lassitude, or the loss of appetite, or whatever it may be which first indicates impaired health, is not the cause, but the effect of the derangement in some part of the system, which is commonly called loss of health. The progress of the disease or derangement may have been long and insidious far before its outward indications arrest attention. Hence arises the second error of invalids, that if they observe and act upon the symptoms promptly they expect their medical adviser to effect a correspondingly rapid cure. The want of sound philosophy in this reasoning needs only to be pointed out to be rendered clear. A form of disease which has crept on unobserved may have taken unsuspected deep root before discovery ; and such an unwelcome tenant of the system cannot, in all cases, be dislodged, except

by the exercise of the utmost patience and skill. In every condition of life the duty of watchfulness over the health is inalienable, and ought to be maintained in ceaseless vigilance—the healthy to ward off disease—the sickly and delicate to prevent further mischief, and seek the earliest return to strength. The human frame—admirable, and nothing short of marvellous in its structure and power of repair and maintenance—is the subject of constant wear, and this with irregular degrees of demand on the various organs. But in some degree, head, heart, lungs, kidneys, and stomach are in a state of constant waste and renewal, and, unless in healthy vigour, soon become devitalised and weakened. This process goes on from the earliest age to the latest hour of life ; and it may be truly, if somewhat paradoxically, said, that we no sooner begin to live than we begin to die. Each individual finds the natural decay of nature to attack with greatest power his weakest organ : hence one gets sore throat, another bronchitis ; here it is the brain, there a limb ; in one instance the lungs are weak and partially diseased ; in another the action of the heart is defective in propulsive power, and the circulation is abnormally slow. The system of this person is easily susceptible to danger from impure atmosphere ; the blood of that is tainted with a predisposition to gout. In any case, even where no special weakness is readily apparent, there is need for self-denial, for regimen, for attention to due exercise, and for a regular and regulated mode of life. In all these no man is a perfect guide unto himself, and no true reliance can be placed on the mere indications of the feelings. The aid and counsel

of the skilful and thoroughly trained and experienced medical adviser is not less valuable in health than it is indispensable in sickness. Hence, when a medical guide has been selected, his advice should be faithfully followed, and his directions implicitly observed. A grave and foolish error of invalids, and of not a few in strong health, is to prescribe for themselves ; sometimes to adopt a medicine or prescription which has been found to benefit another whose case is assumed to be similar to their own, quite overlooking the fact that the human form never yet presented two identical examples either in cast, appearance, character, health, class of disease, or necessary remedies.

Another prominent error of invalids is that, in removing to the seaside in search of health, the simple change is enough, and that the ordinary habits, pursuits, and mode of life may be carried on, with variations alone due to locality. Some are even unreasonable and unreasoning enough to think that they may carry with them their dissipations, the indulgence in which may possibly have been the cause of the impaired health of which they complain. Our modern life is, at the best, highly artificial, and to discard it, and get back as far as possible to a simple and plain following of Nature, is in itself no mean element in recovery of health. Almost above any other error stands the one of neglect of exercise. Indolent or sedentary habits may have contributed unconsciously to the loss of health ; but it will certainly in most cases not be regained by a perseverance in the same course. Exercise, moderate, gentle, graduated, and supervised by skilful medical observa-

tion, is necessary to reap the benefits derivable from sea air and sea bathing in this highly-favoured resort, or in any other. In this, as in numberless other abuses of natural laws, excess is productive of effects equally baneful with those arising from absolute disuse. This is the place to utter a warning against the too violent and long-continued pursuit of athletic sports. By the robust they are pushed to such extremes as to be productive of grave physical evils ; but to the growing youth and the enfeebled invalid they are highly pernicious. For consumptive persons, most especially, the evil of too much or too violent exercise is to be warmly deprecated. Overmuch zeal sometimes causes patients of this class much suffering, and their medical adviser grave anxiety. Advised to take exercise, they are sometimes apt to follow the advice too literally, and with an excess of determination born of their anxiety to recover ; yet such have been known literally to walk themselves to death. A judicious medical man will frequently prescribe the exact length and duration of walks, and the periods of their repetition, and as convalescence advances and strength returns, will best know how to recommend gradual extension and elongation of route. This will largely contribute to securing the benefits of buoyancy of spirits and that hopefulness of recovery which daily exercise is capable of giving.

To the over-wrought in mind and body, to the broken down from excess of exertion, it is sometimes the duty of the medical man to prescribe for a brief period Lord Melbourne's short advice, "Do nothing."

To possess a love of Nature cultivated in days of

health, is to lay up a store of inexhaustible interest and invaluable gentle occupation in time of sickness ; and he who, in his days of weakness, has a mind for flowers and insects, for rocks and plants, for birds and butterflies, or who has an eye to delight in the contour of a headland, the aerial effects of a sunset, or the gradations of a cloud, has resources which will prove the best assistants to his physician, and priceless aids to the recovery of his own health. To all who for the first time find themselves in the possession of abundant leisure enforced by weakness, the opportunity such as Eastbourne presents in rich variety and proximate temptingness to ask questions of Nature, ought not to be neglected. He who does so commits a grave error. If he overcome the want of taste for such pursuits, he will soon come to look upon his walk or daily ride in a new light ; and instead of an irksome duty, it will become a pleasantly anticipated source of enjoyment, leading to other and refined pursuits beyond. The question of exercise once resolved, and its regular practice established and faithfully carried out, the questions of food and drink will speedily cease to be problems of the first rank, and a distinct step will have been made towards a return to perfect health. To trust to climate alone were unfair and unphilosophical ; to rely on medicine solely were unwise ; but from these combined, with due attention to bodily exercise, suitable in character and well adjusted in quantity, the happiest results may in all proper cases be hoped for ; and it is only in proper cases, that is, those for which Eastbourne is adapted, that this manual is written.

Next in order in the series of invalid's errors is antipathy to the open air. Exercise neglected, seclusion follows ; and few indeed are the interiors of houses where the means of renovation of the atmosphere, though provided, is brought into practical and general use. The observance of this fact is one demanding active and grave attention : and even the vigilant scientist may be tempted to overlook the paramount importance of internal ventilation. Wonderful, indeed, is the ubiquitous power of gases to circulate and become purer thereby ; but, during the hours of occupation the air of most houses becomes extremely impure, from the absence of due thought for causing constant extraction of the vitiated and ingress of the pure. The simple action of human respiration is to contaminate an enormous quantity of atmospheric air. About a gallon per minute is thus rendered useless for human respiration, utterly exhausted by the carbonic acid and organic matter exhaled by each set of human lungs. Every time we breathe (that is 18 times per minute) we deteriorate 30 cubic inches of air by injection therein of 1.29 cubic inch of carbonic acid, or 16.1 cubic feet in 24 hours. These 16 cubic feet of carbonic acid contain $7\frac{1}{2}$ ounces in weight of charcoal. Can any illustration more forcibly point to the absolute necessity of renewal ? Air once breathed is totally unfit for respiration till it has been mingled with fresh air, or, still better, that fresh air be introduced in its place. Internal atmospheres are really artificial climates, and are in reality of primary importance, as in them we spend the chief part of our existence. Ventilation and active renewal of internal atmosphere, both of living and

sleeping rooms, therefore stand in no secondary rank in consideration of health. It is in vitiated atmospheres that pulmonary consumption delights to dwell ; here it is propagated and passed on from generation to generation. It is beyond the range of controversy that there is a direct ratio between the prevalence of lung diseases and the condition of the air in unventilated and crowded dwellings.

Another prominent error of invalids resides in the crude idea of frequent and protracted sea-bathing. They should remember that this is a powerful, and in most cases, an unaccustomed remedy ; and that its power becomes dangerous when improperly resorted to. The effect of the cold sea-bath is to produce a sudden determination of the blood to the more important organs, the brain, heart, and lungs ; and unless the system possesses sufficient reactionary power, the immersion is not unattended with risk. The popular belief in the invigorating, strengthening, and bracing effect of sea-bathing demands, almost beyond all others, the chastening effect and regulation, most especially in the case of invalids, of the best medical advice as to its suitability, its commencement, its practice, and its duration. Sea-bathing ought never to be indulged in, except under advice, by the plethoric, who are liable to apoplexy ; nor by debilitated persons, when the reaction may not be counted on. It ought not, as a general rule, to be persevered in when it produces depression of the spirits, prostration of the strength, shivering, coldness of the surface, lividity of the lips and extremities, instead of that cheerfulness of the mind, warmth and ruddiness of

the surface, and renewed strength of the body, which natural and vigorous reaction should excite.

In all things the healthy action of the great functions of the body is to be sought for. In all cases the medical diagnosis is the only sure guide ; but generally it may be suspected that the stomach, the laboratory of the body, or the liver, its largest gland, has been neglected, and has been permitted to become deranged and therefore injurious. The most over-worked and wearied member of the system is frequently the stomach ; but the secretion of healthy bile, the peculiar function of the liver, has been found to possess an antiseptic power even in the living body ; and the preservation of these two grand organs in healthy vigour should be the primary object of all in health. It forms no small part in most cases of the task of restoration of those laid aside by sickness and disease.

CHAPTER VII.

WHO MAY, AND WHO SHOULD NOT RESORT TO EASTBOURNE FOR HEALTH.

IN the forefront of those to whom a residence at Eastbourne may be confidently prescribed are the overworked. Without exhibiting symptoms of actual disease, this large class, apparently inseparable from, if not a special outgrowth of, modern life, demands the first notice. They may have been reduced in tone by excessive mental toil, or too severe and protracted bodily labour, probably accompanied in each case by the most exacting ordeal of all, wearying and ceaseless anxiety and unrest. An age which demands of each the supreme exertion of all the powers and faculties, frequently exacts even more than this ; and the continual drafts on human energy at length leave the fund, for the time, exhausted, and then, of necessity, rest must be sought. This rest should be accompanied by as complete a change of scene and life as possible, with agreeable surroundings and salubrious accompaniments. Here we have just what is needed. The brain worn and refusing to perform its office with accustomed accuracy and promptness ; the nerves

shattered and excitable to an undue and sometimes irritable degree ; the sleep disturbed and reduced in duration, so as to have ceased to afford necessary refreshment ; the will no longer strong and controlling, but vacillating and uncertain ; the whole man unstrung and depressed, and quite incapable of continuous or vigorous attention to any subject, constitute a phase of temporary depression almost honourable in its causes, but claiming every consideration and gentle attention. Next to a long sea-voyage, which is not suited to all constitutions, there is probably nothing for which Eastbourne is better adapted than for such cases as this, and they are legion. The autumn holiday has perhaps for one or a series of years been neglected. Nature asserts itself ; and proves that what may have been once a luxury has, by the changes and pressure of modern life, become a necessity.

For total change of scene, manners, and surroundings, foreign resorts are frequently tried ; but this is usually totally ignoring the indispensable elements of public accommodation, sanitary arrangements, and other conditions necessary for the maintenance of sound health, or the recovery of that which is enfeebled. Our own haunts are, in those respects, immeasurably better than foreign ones ; and among those of Britain, Eastbourne stands in the very front rank.

The sufferer from dyspepsia comes next under our notice, and demands sympathetic attention. Eastbourne is the place for him. In thus frankly and unhesitatingly giving this view, I do not for a moment counsel such patients becoming their own medical

advisers. Few things affecting the human subject are more insidious in their approach, more unobserved in their progress, and more exacting in their demands for regular and persevering treatment when the evil has acquired such a head that it can no longer be disregarded, than dyspepsia. Among chronic diseases, probably none is more common in its recurrence, more distressing in its effects, or more fraught with serious future ill-consequences than this source of discomfort affecting the organs of digestion and nutrition.

And the malady seems annually to spread, both in the extent and variety of its victims, and in the intensity of its individual effects. As it may arise from various and entirely dissimilar causes, so its treatment has to be varied according to the constitution, habits, and peculiarities of attack in each case. An ever-present, but probably unsuspected, source of imperfect or defective assimilation is to be sought for in habitual respiration of impure air in ill-ventilated dwellings. This tends to deterioration of the blood, bringing in its train the evils of anæmia, dyspepsia, hysteria, or the elements of visceral disease.

The impairment of digestion is, perhaps, the most universal of the ordinary precursors of gout, as Dr. Hood has clearly shown ; and this often dates from an early period of life. It is very apt to be attributed to this or that article of diet rather than to the want of tone in the stomach itself ; and many dyspeptic sufferers render their lives miserable by the successive disuse in their ordinary life of everything that has ever disagreed with them, or appeared to do so. The evil does not even stop here, for Sir Thomas Watson

has placed on record the case of a gentleman who came at last to live on dry toast and mutton chops, and who was rewarded by an attack of scurvy for his abstemiousness and unchanged diet. It is quite necessary for persons of weak digestion to be careful in their selection of food and drink ; but they should not carry their scrupulousness too far, nor act upon it on their own mere personal opinion or feelings at all times, lest the stomach may become so pampered and squeamish that it will at last refuse to digest any but a few selected articles. Many a sufferer from indigestion going on by the imperfect light and guide of his own feelings has led a slavish life from this self-imposed tyranny. Yet this disease is one which, especially in the case of a discreet and obedient patient, is readily and completely controlled by medical aid. Many persons die from the wearing out of one particular organ, the rest of the bodily structure being still healthy. Of all the organs it is universally agreed that the stomach is most exposed to this danger. It is frequently distressed, and, by repeated assaults, its powers circumscribed, and at length well nigh destroyed, both by quantity and quality of food.

Dyspepsia arising in middle life is frequently the forerunner of gout : and in these cases, as well as in those of chronic rheumatism, rheumatic gout, stiffness of the joints, and muscular contractions, few remedies can show such satisfactory results under judicious advice as warm sea baths. For all these cases Eastbourne is well calculated to afford means of relief and ultimate recovery.

It is well known that a congested or hyperæmic condition of the viscera and the distended state of the blood vessels is unfavourable to secretion, and Dr. Gairdner remarks that, when this condition exists the functions of the body are imperfectly performed under such oppression. The consequences are a diminished flow of bile and loaded bowels, suppression of the matters usually evacuated by the kidneys, and a rapid general plethora. If this state be not checked a crisis supervenes, and a paroxysm soon occurs. This, the author just quoted, declares to be the true *ratio signorum* of a fit of the gout, and that a state of congestion must necessarily exist prior to and during a paroxysm. The presence of uric acid in the form of urate of soda in the blood appears to be an invariable accompaniment of the gout, but is not in itself sufficient to account for the gouty paroxysm. A depraved condition of the blood, and the impairment of the great excretory functions of the body, prepares the way for the development of the full distressing effects. In this connection it is important not to overlook or under-estimate that most fruitful cause of numerous classes of disease, a deranged liver. This gland, the largest in the human frame, must be intended to exercise a strong influence in its welfare. There is reason to fear that its importance has been too imperfectly recognised ; but it is hardly too much to say that the liver being wrong very little else can be right. The different but most important functions of chylefication, sanguification, respiration, and elimination are all more or less closely connected with the liver, and its derange-

ment or disease promptly affects them. The consequent derangement of any one speedily leads to the impairment of the rest, and disease frequently of complicated character is the inevitable result. This initial derangement of the liver, which is amongst the most frequent and subtle precursors of gout and rheumatism, is the failure to secrete bile, Nature's aperient, and to cause its healthy flow into the intestines. The healthy liver also next to the lungs assists in relieving the blood of an excess of carbon. The work thus thrown on this important but too much neglected and insufficiently exercised organ is immensely increased, and the certainty of its action adversely affected by indulgence in alcoholic drinks, and by habitual neglect of active bodily exercise. The experienced medical adviser is not slow to detect the faulty liver, and to prescribe appropriate correcting remedies. The effects of gouty blood on the brain are direct and very distressing, causing the will to be feeble, the mind vacillating, and at length existence to become a burden. In all such derangements the liver should be at once suspected, and the true culprit will usually soon be found.

The next class of diseases for which a residence at Eastbourne is calculated to afford great relief, is the large class of tubercular diseases already referred to at some length in the fifth chapter.* This class of diseases is very rare at Eastbourne, and may be said only to exist as imported, that is, among residents who have been advised, and have followed the good counsel, to breathe its atmosphere, and enjoy its pre-eminent

* See page 42.

sanitary condition and healthy climate, with its warm and dry atmosphere. Tubercular diseases are not solely pulmonary; if so, their expulsion might be more easily effected. Their *fons et origo* lie deeper, and such a climate as we rejoice in, with moderate regular exercise, and a nourishing, but not stimulating diet, early hours, judicious bathing, and warm clothing, is capable of effecting happy results, unless the patient has unfortunately delayed too long seeking that medical advice which this class of disease especially demands.

Of diseases affecting particular parts of the body, sciatica and lumbago, local rheumatic affections, Eastbourne takes swift note, and the sufferer from those distressing and painful forms of local disturbance may with great advantage seek a residence here.

In all forms of congestion, the natural relief of the system may most readily be brought about by a removal to this mild climate, where, by the aids of proper regimen and appropriate treatment, the symptoms may be most gradually reduced. Such congestion is especially dangerous to those advanced in life. If in the brain it produces apoplexy; in the respiratory organs bronchitis; in the liver deposition of impure—perhaps practically poisonous—bile; and in the kidneys a cessation of their natural action and functions.

Generally it may be stated that a residence and treatment at Eastbourne are likely to prove of great benefit to all who suffer from nervous affections, from debility, or ague. In cases of bronchitis, influenza, and asthma the effect of the mild Eastbourne atmosphere is peculiarly efficacious: and for all with a

scrofulous tendency, whether acquired or inherited, Eastbourne has many blessings in store.

In each and all the foregoing classes of disease, relief and ultimate recovery may be looked forward to by care and attention, on the part of the patient, in following the directions given him ; first, by his usual medical attendant, who should in all cases be consulted before change of residence is decided upon, and secondly, by the more specially local medical man. If life and health be really estimated at their true precious value (and this is never likely to be done so adequately as when they are temporarily in danger), the slight restraints necessarily imposed for their preservation and extension are only a reasonable premium of assurance which all should be ready and willing loyally to pay and submit to.

The list of those who should not look to Eastbourne for benefit is short and trenchant. The chronically dissolute, the worn out by excess and life-long indiscretion and vicious indulgence have no place here. Eastbourne, whatever it can do—and it is much—in all reasonable cases, has no universal and infallible recreative powers ; and these are beyond its cure. For advanced consumptives it is not possible to hold out a well-grounded expectation of relief. Though well adapted for imparting strength, for checking the progress of the disease, and even of effecting a cure in its earlier stage, yet in the later and more advanced condition Eastbourne cannot pretend to save those who have advanced beyond that stage. It can do much, but like all sublunary agencies, even its benefit-pouring ability and capacity have limits, which this chapter has sought fairly and frankly to inquire into and define.

CHAPTER VIII.

HOW TO SECURE THE BENEFIT OF RESIDENCE.

THIS final chapter will be to some extent a *résumé* of those which have preceded it ; for in all of them the main application of each subject discussed to the single objects in view, the strengthening of those in health, and the recovery of those temporarily deprived of it, has been apparent. It must be obvious to all that no place of residence can in itself be justly regarded as a complete antidote. Advantages must be reaped only by the exercise of definite positive effort—not necessarily physical—but still actual. It may be that the requisite effort consists in the control of the will, in the rousing of languishing feelings, in abstinence for at least a time from beloved tastes and enervating habits ; but whatever be the course of self-denying rule prescribed, it should be faithfully and cheerfully kept and persevered in for a sufficient period of time. Variations and gradual relaxations may, and in most cases will, be needed as the treatment of the case proceeds. This will be the patient's reward and the medical adviser's delight, as being the fair and just outcome of rules observed, regimen followed, and consequent benefits realised.

In order that possible disappointment may be avoided, the intending sea-side resident should seek and follow the opinion of the usual medical adviser, who knowing the peculiarities of habit, temperament, and constitution, will know in a certain degree whether Eastbourne is suited to the patient and the patient to Eastbourne. His general directions will be the best preliminary guide to the resident medical man under whose care the patient may place himself. The needful particular remedies and counsel during residence here will then more certainly proceed in the true path without any loss of time in unaided preliminary observation, and the best treatment will more easily be at once entered upon. It should be remembered that no two constitutions are alike; and that even with outward apparent uniformity of symptoms, the essential treatment may require to be very considerably varied. In no respect, it may be safely averred, is Eastbourne better equipped than in the excellence of her medical practitioners; and the services of one of them having been sought, his directions should be implicitly followed. Full and complete confidence in the medical adviser is an element of no slight moment in the search after the return of the most precious of all human treasures, bodily health and mental vigour.

In limine, it is not desirable for either the declining in health, or for the confirmed but not hopeless invalid, to be removed to a resort entirely, or even mostly, frequented by invalids. Cheerfulness of surroundings, of which we in Eastbourne possess such an ample treasure, exercises a powerful effect for good on the invalid from the first, and continues its invaluable

aid to the last hour of residence, and then dwells in the regretful memory long after other duties have recalled the strengthened and refreshed visitor to pursuits laid aside for a season. But to be compelled at every step and turn to meet and gaze on the same pale faces, depressed attitudes, and forlorn looks, where these form a decided, or even an appreciable, feature in the population, is to encounter a depressing influence, the power of which has to be surmounted by the doctor, in addition to the peculiar malady for which he is called in to prescribe. Eastbourne being a resort much rejoiced in by the healthy and strong, and available for residence at all seasons, is never wanting in an overwhelming excess of health, which very far outbalances the small proportion of wan looks with which it is diluted. In the midst of such a population, where health, activity, and buoyancy are the characteristics, the eyes of the sufferer are far more likely to acquire a speedy brightness, the elasticity of the spirits will sooner return, and the firmness of the step be more readily recovered than among depressing and gloomy surroundings. Cheerful society, therefore, with which we abound, should be sought and moderately enjoyed, especially the outdoor society of lively friends.

Then some occupation for the mind, however light and apparently trivial, is necessary. Hence it is that the lighter pursuits, and even "hobbies," of healthier days lend their kind aid, and exert a beneficial influence. Next in order is the return to primitive, simple, and refreshing modes of life—to early rising, to active exercise, to abstinence, to the air of the

Downs, the entire change of habits, and the rest given to the stomach and other important organs by the strict pursuit of a definite hygienic course. The result is a completely new sanguification and the return of the colour to the cheek ; the presence of the clear eye, the agreeable breath, and the regular and healthy action of the secretory organs are established. With the powerful additional aid of suitable climate, it is undoubted that many pulmonary affections may be cured, suspended in their course, or relieved, and the sufferer loosed from his chains of depression and pain, and bidden to go free. But the climate must have room and time for its full effect, the air must be breathed, the exercise (much or little, as may be deemed proper) must be taken, the unsuitable food and drink must be proscribed, and any tendency to indolence of habit abjured.

For the indispensable practice of bodily and mental hygiene, the patient and his immediate attendants are responsible ; and if these be neglected or evaded the best medical skill may be exerted in vain, or, at least, under conditions not the most favourable for their success. Bodily hygiene, then, includes primarily good and abundant food, pure air, a clean skin, and suitable exercise. Mental hygiene includes rational, not extreme, mental exercise ; and the regulation of the passions. These simple forms embody the conditions most favourable to the maintenance or recovery of sound health ; but they are daily ignored by the immense majority of the human race. For a time with impunity by the young and the vigorous, and for shorter periods by the constitu-

tionally weak, or defective in vitality, they may be set at nought; but sooner or later they will assert their essential power. He who resorts hither, therefore, for health, will act wisely in at once getting into strict agreement with these principles of Nature as the first and important steps on the high road to recovery. A word may be added as to the abuse of alcoholic liquors. Resorted to under the enlightened practice of modern days with far less frequency than formerly, it were to be wished that for the weakly their use could be entirely abandoned. When prescribed, a moderate quantity of wine may be taken with advantage in some cases as a tonic and gentle stimulant to digestion, but it is always a dangerous remedy—a two-edged sword. The invalid will do well to avoid its use altogether, unless with the express sanction and to the precise extent and frequency laid down by the medical attendant. Secret indulgence in it will not deceive him, though it will militate against his best efforts. Medicines and regimen will not respond to the demands made upon them if alcoholic drinks, not prescribed, be indulged in; and the medical adviser is placed in the unfair and embarrassing position of having to watch impotent results from his medicines, knowing well the cause, but shrinking from a direct charge of indulgence, though he may, all the while, feel assured of it. No invalid having the desire for recovered health should be tempted to enter on such an ill-advised course.

Yielding in importance only to this is the subject of food. Discipline is essential to health, and there is no discipline in self-indulgence. Especially in

matters of food are watchfulness and self-control needful. Strict adherence to the directions of the medical man is here very important, and need not be longer dwelt upon—a temperate yet generous regimen is one of the handmaids of returning health. The facilities for exercise should be given full room for producing their good effects. Exercise may be protracted or short, slight or severe; but whatever the particular case demands, here is the opportunity for it, and he acts wisely who acts cautiously but regularly in the use of it.

The invalid resident should avoid all absorbing mental occupation. To give the mind gentle exercise is useful and beneficial—it is a hygienic heresy to over-task it. Hence light reading may be followed in sickness with the prospect of preparing the mind for more serious work in due time after recovery. A state of mental ease has a most beneficial influence on the bodily powers. All subjects of worry and inordinate anxiety should be avoided.

Happy is the invalid who possesses or acquires the faculty of throwing off his ordinary cares and anxieties for a time. He slowly accumulates a reserve of power which will hereafter render him capable of more readily disposing of them. The incautious use of sea-bathing is an error to be carefully avoided. In the sixth chapter* the ill-advised indulgence in this practice has been dwelt upon, and no necessity exists to refer to it in detail here. Many that resort to the seaside for health effectually destroy their chances of regaining it by

* See page 54.

their inordinate passion for too frequent and too-long-continued sea baths.

I have now pointed out, with as much clearness as is compatible with conciseness, the main and most essential points which demand the attention of the seeker after health. It is necessary, in conclusion, only to offer one word more. The choice of rooms is very important. If confined, ill-ventilated, or too small, they impose a formidable difficulty in the path of recovery.

Eastbourne has no magic to perform. Its power is a simply natural one. It may be thwarted by inattention ; but by care, and a real desire to obtain its best aid, the effects in numberless cases are little short of magical in their rapidity and completeness of restoration.





